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EXAMINER	
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ART UNIT	PAPER NUMBER
2195	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.	Applicant(s)	
	10/718,401	BISDIKIAN ET AL.	
	Examiner	Art Unit	
	MENGYAO ZHE	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-35 are presented for examination.

Claim Objections

2. Claim 25 objected to because of the following informalities:

i) line 3, instead of codes "coupled" to the tangible media, the applicant should change it to codes "stored" to the tangible media. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. The claim languages in the following claims are unclear and indefinite:

i) Claim 1, it is unclear what the relationship is between "a workload of an active resource" in lines 1-2 and "parent workload group" < i.e. is the parent workload group part of the workload of an active resource? Consistent names should be used if they are the same entity.>

it is unclear what the relationships are among "the workload of an active resource" in lines 1-2, "a collection of units" in line 2, and "a collection of workload units" < i.e. while it is clear that "a collection of units" belong to "the workload of an active resource", it is unclear if "a collection of workload units" are also part of the "workload of an active resource". Is "a collection of units" the same as "a collection of workload units"? Consistent names should be used.>

Claims 15 and 25 have the same deficiencies as claim 1 above.

ii) Claim 2, lines 2-3, it is unclear what the relationship is between the "candidate resource" and the "target resource" in line 15, claim 1 <i.e. are they the same? If so consistent names should be used.>

Claims 16 and 26 have the same deficiencies as claim 2 above.

iii) Claim 7, lines 2, it is uncertain who is "receiving a probe message" <i.e . is it the active resource that receives this message?>.

lines 4, it is unclear how "guessing a depth…" is done and who is doing the guessing < i.e. How is guessing defined? A random number is generated? And is it the entity of the workload unit that performs the guessing?>

line 6, it is unclear who is doing the "sending". Furthermore, it is unclear what the relationship is between the "probe message" in line 3

and the "response" in line 6 < i.e. does the probe message help to determine the response?>

Claim 31 has the same deficiencies as claim 7 above.

iv) Claim 12, it is unclear what "a load-depended subset of a complete key identifier is < i.e. what is it mean to be a subset of a key identifier? And what does it mean to be load-dependent?>

Claim 23 has the same deficiencies as claim 12 above.

v) Claim 14, it is unclear what the relationship is between the "at least one key identifier" that is associated with a client in line 21 and the "key identifier" that is associated with a workload unit in line 3 <i.e. are they the same kind of identifiers?>

Line 22, it is unclear what the relationship is between "the load-dependent group of identifier keys" and the "a dynamically varying group of key identifiers" in line 9 < i.e. Are the two groups actually the same group? If so consistent names should be used>

Line 23, it is unclear if "identifier keys" are the same as "key identifier" in line 21. < i.e. if they are the same thing, the same name should be used.>

vi) Claim 35, it is uncertain as to what is meant by virtual key includes a hash value <i.e. hash functions or mappings work as follows: a function

H takes in input m and outputs value h, h=H(m). h the output, is called the hash value. So what is the input and output in claim 35? Is the virtual key the input, if it is, it can't include a hash value, since the hash value is the output. What is the output? Is it the key ID or the target resource?>.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 3-6, 11, 12, 15, 16-19, 22, 23, 25-30, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Bjornson et al., Pub No. 2002/0194173 (hereafter Bjornson).

7. Bjornson was cited in the previous office action.

8. As per claims 1, 15, and 25, Bjornson teaches the invention as claimed including a method for dynamically adjusting a workload of an active resource, the workload being expressed as a collection of units, each unit including its own key identifier, the active resource being associated with at least one parent workload group, the parent workload group including a collection of workload units such that workload units

belonging to the parent workload group share an identical sequence of values at a specified depth value of their key identifiers, the identical sequence of values defining a group key identifier associated with the parent workload group (Fig 5: please note the names assigned to the task and sub-task blocks colored in white), the method comprising:

independently determining by the active resource that an overload condition exists at the active resource (Paragraph 60);

if the overload condition exists:

increasing the depth value of the parent workload group such that at least two child workload groups are identified (paragraphs 60-61);

assigning a target resource to manage at least one of the child workload groups (paragraphs 56, 60-61).

9. As per claims 2, 16, and 26, Bjornson teaches if the overload condition exists, identifying at least one candidate resource to which the child workload groups may be distributed using a decentralized protocol (Paragraphs 56 and 60: one of the child is kept by the original worker computer, which corresponds to a resource. The other child is added to the VSM bulletin board for another worker computer to take when it is not busy; Moreover the decision of splitting the task is made by the worker computer alone, thus it is decentralized.).

10. As per claims 3, 17, and 27, Bjornson teaches requesting workload acceptance from the target resource at peer level (Paragraphs 56, 60-61).

11. As per claims 4, 18, and 28, Bjornson teaches recording the parent workload group as inactive at the active resource (Paragraph 56: those worker computer that are forced to wait are considered to be inactive.).

12. As per claims 5, 19, and 29, Bjornson teaches transferring application-specific objects corresponding to the child workload groups at peer level (Paragraphs 60-62: tasks are essentially programs that implements algorithms. The Examiner has interpreted the program to be application-specific objects. When one of the divided task is added back to the Task List, the sub-task is transferred.).

13. As per claims 6 and 30, Bjornson teaches redirecting entities operating on elements of the parent workload group to the target resource managing the child workload group (Paragraph 56, 60, 71-74: database corresponds to entities. They can be split up according to how the tasks are split up. When a sub-task with its associated database gets assigned to another worker computer, entities are redirected.).

14. As per claims 11, 22, and 34, Bjornson teaches further comprising associating the workload unit with the key identifier such that the key identifier encodes one or more attributes of the workload unit (Fig 5: Because the naming system contains the name of the parent task for each sub-task, the parent identification in a child's name corresponds to an attribute.).

15. As per claims 12 and 23, Bjornson teaches constructing a virtual key for mapping to the target resource, wherein the virtual key includes a load-dependent subset of a complete key identifier (Fig 5, unit d: Taskt1.B is the complete key identifies and ".B" is the subset.).

Claim Rejections - 35 USC § 103

16. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

17. Claims 7-10, 13, 14, 20, 21, 24, 31-33, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bjornson et al., Pub No. 2002/0194173 (hereafter Bjornson).

18. As per claims 7 and 31, Bjornson discloses a system that can break down a single task into different levels of sub-tasks, each with its associated identifier, so that they may be assigned to computers according to the computer's dynamic workload. Furthermore, Bjornson teaches estimating the amount of computational resources available in each computer to see if a task needs to be broken down. Bjornson also teaches a group key identifier that indicates the nearest known active parent group to which it belongs (Fig 5; Paragraphs 60-61).

19. Bjornson, however is silent as to, the specifics of receiving a probe message from an entity operating on a workload unit that is a member of the parent workload group, the probe message including a guessed identifier key formed by guessing a depth to be associated with the unit's key identifier; and sending a response to the entity indicating the group key identifier that the current resource locally determines to be the nearest known active parent group to which the element's key identifier belongs.

20. To specifically specify the detailed steps of receiving a probe message from an entity operating on a workload unit that is a member of the parent workload group, the probe message including a guessed identifier key formed by guessing a depth to be associated with the unit's key identifier; and sending a response to the entity indicating the group key identifier that the current resource locally determines to be the nearest known active parent group to which the element's key identifier belongs would have been obvious to one of ordinary skill in the art as it is well known that in order for the worker computer to keep track of the tasks and subtasks it is working on, it needs to keep track of the parent groups of all of its child task groups.

21. As per claim 8, Bjornson teaches wherein the entity operating on a workload unit uses the response to further refine its estimate of a correct depth to be associated with the unit's key identifier; and probing another resource associated with the parent key group formed by using the refined depth of the unit's key identifier (Paragraphs 60-61).

22. As per claims 9, 20, and 32, Bjornson teaches

determining that an under-load condition exists at the active resource (Paragraphs 95-96: limitation is set for the amount of time a worker computer is to remain idle, when it is exceeded, it is inherent that the system will know that a worker computer is under-loaded.)

identifying at least two workload groups for consolidation into a consolidated workload group; generating a consolidated key identifier such that workload units belonging to the consolidated workload group share an identical sequence of values at a specified depth value of the consolidated key identifier; and managing the consolidated workload group by the active resource (Paragraph 69, 91 and Fig 5).

23. Bjornson does not teach consolidation of workload group specifically under the condition that there is an under-load at the active resource. However, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to combine the teachings of consolidating workload groups and determining an under-load condition exists so that under the specific situation that an under-load condition exists, workload groups are consolidated, because just like Bjornson's teaching of increasing the depth value of parent workload group to balance the workload in the situation that one workload group is overloaded, consolidation of workload group is another way to balance the workload group in the opposite situation.

24. As per claims 10 and 21, Bjornson teaches wherein generating the consolidated key identifier includes decreasing the depth value of the parent workload group such

that the consolidated workload group is identified (Fig 5: please note the ID given for task blocks colored in gray.).

25. As per claim 13, Bjornson does not specifically teach using the constructed load-dependent virtual key as an input to a separate mapping service that returns the identity of the target resource to which the workload units belonging to the virtual key should be directed.

26. However, it would have been obvious to one having ordinary skill in the art at the time of the invention to let each worker computer, which corresponds to the resources, keep track of the tasks that are associated with its task ID so that it knows what part of an overall task it is currently working on, and further so that it may reconsolidate the results of each sub-tasks into one final task result in the end (Fig 5, paragraphs 63 and 69.).

27. As per claim 14, Bjornson teaches A system for running a distributed computer application whose workload can be decomposed into a set of workload units, each workload unit including its own key identifier, over a dynamically varying set of distributed resources, the number of resources involved in the distributed computation varying dynamically in response to changes in an overall workload, the system comprising (Fig 5 and paragraph 60):

a set of active resources cooperatively managing an entire set of key identifiers constituting the overall workload, each individual active resource managing a dynamically varying group of key identifiers, each resource independently evaluating its

own workload condition and deciding on the creation to reduce its workload (Fig 5, paragraphs 60);

an overall set of resources, of which the active resources constitute a subset that can be utilized as part of the distributed computer application as needed (Paragraphs 60-61);

a set of client entities utilizing the distributed application, each client entity being associated with at least one key identifier, and each client entity dynamically determining a load-dependent group of identifier keys that each such currently belongs to (Fig 5).

28. Bjornson does not teach consolidation of group key identifiers to increase its workload and a mapping service configured to receive a virtual key associated with at least one key identifier as input and configured to produce the identity of the target resource from the overall resource set as an output.

29. However, it would have been obvious to one having ordinary skill in the art at the time of the applicant's invention to combine the teachings of consolidating workload groups and determining an under-load condition exists so that under the specific situation that an under-load condition exists, workload groups are consolidated, because just like Bjornson's teaching of increasing the depth value of parent workload group to balance the workload in the situation that one workload group is overloaded, consolidation of workload group is another way to balance the workload group in the opposite situation. It is also obvious that each worker computer, which corresponds to

the resources, keep track of the tasks that are associated with its task ID so that it knows what part of an overall task it is currently working on, and further so that it may reconsolidate the results of each sub-tasks into one final task result in the end (Fig 5, paragraphs 63 and 69.).

30. As per claim 24, Bjornson teaches an external service configured to identify at least one candidate resource to which the child workload groups may be distributed (Paragraph 56: the VSM, which are external to the worker computers governs how the task may be taken by the worker.).

31. As per claim 33, Bjornson teaches wherein the program code to generate the consolidated key includes program code to decrease the depth value of the parent workload group such that the consolidated workload group is identified (Fig 5 and Paragraph 69).

32. As per claim 35, Bjornson teaches program code configured to construct a virtual key for mapping to the target resource, wherein the virtual key includes a hash value of the key identifier (Fig 5).

Response to Arguments

33. Applicant's argument filed on 1/14/2008 claims 1-35 have been fully considered but are not persuasive.

34. In the remark applicant argued in substance that:

i) Claim 1, Pg 16, Bjornson does not teach a workload expressed as a collection of units, each unit including a key identifier. It does not teach an active resource associated with at least one parent workload group, the parent workload group has a collection of workload units such that workload units belonging to the parent group share an identical sequence of values at a specified depth.

Bjornson does not teach increasing the depth value of a parent workload group such that at least two child workload groups are identified.

ii) Claim 4, Pg 18, Bjornson does not teach recording the parent workload group as inactive at the active resource.

iii) Claim 11, Pg 19, Bjornson does not teach associating the workload unit with the key identifier that encodes an attribute of the workload unit.

iv) Claim 12, Pg 19, Bjornson does not teach constructing a virtual key for mapping to the target resource, wherein the virtual key includes a load-dependent subset of a completely key identifier.

v) Claim 7, pg 20, the step of receiving a probe message from an entity operating on a workload unit that is a member of the parent workload group, the probe message including a guessed identifier key formed by guessing a depth to be associated with the unit's key identifier; and sending a response to the entity indicating the group key identifier that the current resource locally determines to be the nearest known active parent group to which the element's key identifier belongs is not obvious based on teachings of Bjornson.

vi) Claim 8, Pg 21, is not obviously taught by Bjornson.

vii) Claims 9, 20, and 32, Bjornson does not teach identifying at least two workload groups for consolidation into a consolidated workload group.

viii) Claim 13, Pg 23, the step of using the constructed load-dependent virtual key as an input to a separate mapping service that returns the identity of the target resource to which the workload elements belonging to the virtual key should be directed is not obviously taught by Bjornson.

ix) Claim 14, Pg 24, Bjornson does not manage a set of key identifiers for the purpose of dynamically adjusting to over and under load conditions. Bjornson does not teach using the key to map a workload group to a single server through a mapping service.

x) Claim 24, Pg 24, Bjornson only teaches server assigning itself a task from VSM instead of an external service that is configured to identify a resource to which a child workload group may be distributed.

xi) Claim 33, Bjornson does not teach generating consolidated key to decrease the depth value of the parent workload group such that the consolidated workload group is identified.

xii) Claim 35, Bjornson does not teach the virtual key includes a hash value of the key identifier.

35. The Examiner respectfully disagree with the applicant, as to point:

i) Bjornson does teach a workload expressed as a collection of units, where the workload is the entire searching task and the units are the entire searching task that may be broken up into smaller searching tasks (Para 53, lines 4-8). Each unit does include the key identifier, which is shown in units a, b, c of Fig 5 (i.e. task 1, task 1.B, Task1.A). Bjornson teaches that resource such as the worker computers may be associated with each workload group (Para 53, lines 1-4). Furthermore, the parent workload group such as Task1 has a collection of workload units such as Task1.B and Task1.A where at the depth of 2 (task 1 is considered to be depth 1, and Task1.B and task1.A has depth of 2), the two subtasks, Task1.B and Task1.A, share an identical sequence in the identifier, which is Task1 in this case.

Bjornson teaches that the depth of the parent workload group may be increased, as shown in the multiple depth of the tree in Fig 5 whenever a workload is broken up into two subtasks (Para 61, lines 10-14).

ii) Although vaguely stated, the Examiner interpreted this claim to mean a task that is waiting, hence inactive, to be processed by an active resource, which is a worker computer. This is taught in Para 56, lines 8-17.

iii) Bjornson teaches a key identifier associated with each workload unit or task (Fig 5, unit (b): Task1.B is the identifier for that particular subtask). The identifier encodes the attribute of the parent of that particular task (i.e. Task1.B has the partial name of Task1, which tells one that Task1.B belongs to Task1.).

iv) The claim is vaguely stated since one cannot understand what is meant by a load-dependent subset of a complete key identifier. Therefore the Examiner has interpreted the claim to mean a key that has a subset of keys, and the entire key is related to a resource. In Fig 5, Bjornson shows how each sub-task has a key such as Task1.B, where B is considered to be the subset of the entire virtual key Task1.B. Furthermore, each worker computer look as a Task List which contains all the names of a task to take with itself to process (Para 56, lines 8-17).

v) Since neither the claim nor the specification clearly defines or describes how the step of guessing is performed (i.e. how the system arrives at the answer of depth of a key's identifier such as the algorithm used for the guess), the Examiner interpreted guessing as any way of arriving at an answer of to what depth does a key identifier indicate. Fig 3 and Fig 5 of Bjornson indicates how the key identifier is formed, clearly, the number of dots in the identifier such as Task1.B.B indicates the depth of the tree and the sub-key which precedes the

dot indicates the parent of the key after the dot (i.e. Task1 is the parent of B). Bjornson also teaches that the worker computer looks to the VSM bulletin board, which contains the identifiers of the tasks, in order to determine whether a task associated with itself has a parent or not, and the number of iterations it needs to reach to the task's root or final parent (Para 64-66), therefore, it would have been obvious that a person of ordinary skill in the art would have been motivated to combine Bjornson's key identifier nomenclature that indicates the depth with Bjornson's teaching of worker computer looking at task names to determine the depth of a subtask in the task tree to achieve the claimed invention, which is arriving at an answer to the depth of a key identifier, hence guessing, and identifying the parent of the key identifier.

vi) Estimating or guessing the depth was argued in point (v), please refer to the section above for details. Para 60 and 61 teaches examining other worker computers that would have been executing the parent task that was originally too big for them to execute in order to see if after the division of the parent task, hence increase in depth value of its children tasks, the child tasks are big enough for the computer workers.

vii) Bjornson teaches if a task is too small, it may be combined with another task (Para 91).

viii) Bjornson teaches an identifier key system to identify all tasks and subtasks (Fig 3, 5). Bjornson also teaches that a worker computer has the ability to select task from an identifier-key-containing task list that is associated with a

specific section of a database, or resource (Para 92-94). It would have been obvious that a person of ordinary skill in the art would have been motivated to combine the teaching that a task may be identified by a key and a task is associated with a resource in order to achieve using the key of the task to identify the task's associated resources, which are the database, so that the key may be used as an input to a mapping service that returns the identify of the resource, which is the claimed invention.

ix) The entire teaching of Bjornson deals with dividing task and combining tasks under the condition o f overloading and under-loading. If a task is too big for a worker group, the task needs to be divided into subtasks dynamically so that it is smaller and more manageable (Para 60). If a task is too small, it may be combined with other tasks so that it is suitable for the worker computer to process (Para 91).

The Examiner already admitted in previous office action that Bjornson does not specifically teach a mapping service. However, please refer to section (viii) for explanation of obviousness.

x) Although Bjornson does teach that a worker computer may look for a task for itself to process, the VSM also need to make sure that a task may only be taken by at most one worker computer, so the external device VSM does participate in how a task may be distributed and to whom it gets distributed to in the event that there is competition (Para 56, lines 8-12).

xi) Bjornson teaches combining two tasks together to form a larger task (Para 91). Bjornson also teaches that a parent task has less depth value than its children in Fig 3, 5 (i.e. Task1 has less depth than Task1.A and Task1.B where the dot indicates depth.). It is inherent when two child tasks come together to form a parent task, the parent will have a depth value less than its original children.

xii) Although the specification clearly defines hash value and its relationship with virtual key and key identifier, the claim languages fail to capture its meaning and relationship. The specification seem to suggest that a virtual key that may or may not be different from the key identifier is inputted through a hash function to generate a hash value, not what claim 35 seems to suggest, which is virtual key that contains a hash value. Due to the ambiguity, the Examiner simply interpreted the claim to mean that the identifier key contains subsets of keys, and a resource is associated with each key. This is taught by Bjornson where .B is the subset key of the entire key Task1.B as shown in Fig 5.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MengYao Zhe whose telephone number is 571-272-6946. The examiner can normally be reached on Monday Through Friday, 10:00 - 8:00 EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached at 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Meng-Ai An/

Supervisory Patent Examiner, Art Unit 2195